

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 2, 6, 10-12, 16-17, and 21 in accordance with the following:

1. (PREVIOUSLY PRESENTED) The communicating system according to claim 2, further comprising:

a buffer buffering data transmitted from the server to the client and accelerating data output from the server so as to increase a throughput assigned to a connection to the client by the server.

2. (CURRENTLY AMENDED) A communicating system for relaying a communication between a server and a client, comprising:

a first receiving ~~device~~ module capable of receiving data from a network, the data obtained by:

converting a first protocol ~~at in an application layer protocol level, for~~ of data transmitted from the client to the server, into a second protocol at in the application layer protocol level, the second protocol allowing an increase of ~~where a size of a data transfer window in for a transport layer protocol level can be changed, the second protocol so that~~ allowing a larger amount of data can ~~to~~ be transferred at a one time than with a data transfer window whose size is not increased, and by

multiplexing data of multiple connections so that a connection with ~~a changed an~~ increased window size in the transport layer protocol level can be used continuously; and the larger amount of data is transmitted to the network by continuously using the second protocol;

a demultiplexing ~~device~~ module capable of demultiplexing the received data;

a first converting ~~device~~ module capable of converting a protocol of the demultiplexed data into the first protocol;

a first transmitting ~~device~~ module capable of transmitting the data converted by said first converting device to the server;

a second receiving ~~device~~ module capable of receiving data transmitted from the server to the client;

a second converting ~~device~~ module capable of converting the first protocol of the received

data received by the second receiving module into the second protocol;

a multiplexing module capable of ~~device~~ multiplexing data of multiple connections converted by said second converting device so that a connection ~~with a~~ using the increased ~~changed~~ window size in the transport layer protocol level can be used continuously and the larger amount of data can be transmitted; and

a second transmitting ~~device~~ module capable of transmitting the data multiplexed by said multiplexing ~~device~~ module to the network.

3. (CANCELLED)

4. (ORIGINAL) The communicating system as set forth in claim 2, further comprising:

an idling device performing an idling operation corresponding to a resource assigned to the client,

wherein said transmitting device transmits data after the idling operation is completed.

5. (ORIGINAL) The communicating system as set forth in claim 2, further comprising:

a charging device performing a charging process for a service provider of the server, wherein said receiving device receives a request from the client through the network, wherein said charging device determines whether or not the request from the client is a request to be issued to the server,

wherein when the request from the client is the request to be issued to the server, said transmitting device transfers the request from the client to the server and said charging device charges the service provider.

6. (CURRENTLY AMENDED) A communicating system for relaying a communication between a server and a client, comprising:

a first receiving ~~device~~ module capable of receiving data transmitted from the client to the server;

a first converting ~~device~~ module capable of converting a first protocol ~~at~~ in an application ~~protocol~~ layer level of the received data into a second protocol ~~at~~ in the application ~~protocol~~ layer level, the second protocol allowing an increase of ~~where~~ a size of a data transfer window ~~in~~ for a transport layer protocol level ~~can be changed, the second protocol allowing so that~~ a larger amount of data can ~~to be~~ transferred at a ~~one~~ time than with a data transfer window whose size is

not increased;

a multiplexing devicemodule capable of multiplexing data of multiple connections converted by said first converting devicemodule so that a connection with a ~~changed~~ an increased window size in the transport layer protocol level can be used continuously;

a first transmitting devicemodule capable of transmitting data multiplexed by said multiplexing device to the network;

a second receiving devicemodule capable of receiving data from the network, the data obtained by:

converting the first protocol of data transmitted from the server to the client into the second protocol, and by

multiplexing data of multiple connections so that a connection with a ~~changed~~ an increased window size in the transport layer protocol level can be used continuously, and the larger amount of data transmitted to the network by continuously using the second protocol;

a demultiplexing devicemodule capable of demultiplexing the received data;

a second converting devicemodule capable of converting a protocol of the demultiplexed data into the first protocol; and

a second transmitting devicemodule capable of transmitting the data converted by said second converting devicemodule to the client.

7. (CANCELLED)

8. (ORIGINAL) The communicating system as set forth in claim 6, further comprising: a charging device performing a charging process for a user of the client, wherein said receiving device receives a request to the server from the network, wherein said charging device determines whether or not the request to the server is a request from the client, and

wherein when the request to the server is the request from the client, said transmitting device transmits the request to the server and said charging device charges the user.

9. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 10, said program further causing the computer to perform buffering data transmitted from the server to the client and accelerating data output from the server so as to increase a throughput assigned to a connection to the client by the server.

10. (CURRENTLY AMENDED) A computer-readable recording medium on which a

program for a computer controlling a communication between a server and a client is recorded, said program causing the computer to perform:

a first receiving receiving data from a network, the data obtained by:

converting a first protocol ~~in~~at an application ~~layer protocol~~ layer level, ~~for~~ of data transmitted from the client to the server, into a second protocol ~~at~~ in the application ~~layer protocol~~ layer level, the second protocol allowing an increase of ~~where~~ a size of a data transfer window in ~~for~~ a transport ~~layer protocol~~ layer protocol level ~~can be changed, the second protocol allowing so~~ that a larger amount of data can be transferred at a one time than with a data transfer window whose size is not increased, and by

multiplexing data of multiple connections so that a connection with ~~a changed~~ an increased window size in the transport ~~layer protocol~~ layer protocol level can be used continuously, and the larger amount of data is transmitted to the network by continuously using the second protocol;

demultiplexing the received data;

a first converting converting a protocol of the demultiplexed data into the first protocol;

a first transmitting the data converted by said first converting to the server;

a second receiving receiving data transmitted from the server to the client;

a second converting converting the first protocol of the ~~received data~~ received by the second receiving into the second protocol;

multiplexing data of multiple connections converted by the second converting so that a connection with ~~a using the increased converted~~ using the increased window size in the transport ~~layer protocol~~ layer protocol level can be used continuously, and the larger amount of data can be transmitted; and

a second transmitting transmitting data multiplexed by said multiplexing network.

11. (CURRENTLY AMENDED) A computer-readable recording medium on which a program for a computer controlling a communication between a server and a client is recorded, said program causing the computer to perform:

a first receiving receiving data transmitted from the client to the server;

a first converting converting a first protocol ~~at~~in an application ~~layer protocol~~ layer level of the received data into a second protocol ~~at~~ in the application ~~protocol~~ layer level, the second protocol allowing an increase of ~~where~~ a size of a data transfer window in ~~for~~ a transport ~~layer protocol~~ layer protocol level ~~can be changed, the second protocol allowing so that a larger amount of data can be~~ transferred at a one time than with a data transfer window whose size is not increased;

multiplexing data of multiple connections converted by said first converting so that a connection with ~~an increased~~ a changed window size in the transport ~~layer protocol~~ layer protocol level can be used continuously;

a first transmitting transmitting data multiplexed by said multiplexing to the network;
a second receiving receiving data from the network, the data obtained by:
converting a first protocol of data transmitted from the server to the client into the second protocol, and
multiplexing data of multiple connections so that a connection with a ~~changed~~ an increased window size in the transport layer protocol level can be used continuously, and the larger amount of data transmitted to the network by continuously using the second protocol;
demultiplexing the received data;
a second converting converting a protocol of the demultiplexed data into the first protocol; and
a second transmitting transmitting the second converted data to the client.

12. (CURRENTLY AMENDED) A communicating method, comprising:
forming a virtual tunnel having a multiplexing protocol, where a size of a data transfer window in a transport protocol sent within the multiplexing protocol can be ~~changed~~ increased and a connection with a converted window size in the transport protocol can be used continuously, for hiding a network delay that takes place between a server and a client; and
continuously using the virtual tunnel as a communication bypass between the server and the client so as to increase a throughput between the server and the client.

13. (ORIGINAL) The communicating method as set forth in claim 12, further comprising:
charging a user of the client for a communication using the virtual tunnel.

14. (ORIGINAL) The communicating method as set forth in claim 12, further comprising:
charging a service provider of the server for a communication using the virtual tunnel.

15. (PREVIOUSLY PRESENTED) The communicating system according to claim 16, further comprising buffer means for buffering data transmitted from the server to the client and accelerating data output from the server so as to increase a throughput assigned to a connection to the client by the server.

16. (CURRENTLY AMENDED) A communicating system for relaying a communication between a server and a client, comprising:

first receiving means for receiving data from a network, the data obtained by:

converting a first protocol ~~at in~~ an application ~~layer protocol~~ level, ~~for~~ of data transmitted from the client to the server, into a second protocol ~~at in~~ the application ~~layer protocol~~ level, ~~the second protocol allowing an increase of~~ ~~where~~ a size of a data transfer window ~~in for~~ a transport ~~layer protocol level can be changed, the second protocol so that~~ allowing a larger amount of data ~~can~~ to be transferred at a ~~one~~ time ~~than with a data transfer window whose size is not increased~~, and by

multiplexing data of multiple connections so that a connection with ~~a changed~~ an increased window size in the transport ~~layer protocol level can be used continuously, and the~~ larger amount of data is transmitted to the network by continuously using the second protocol;

demultiplexing means for demultiplexing the received data;

first converting means for converting a protocol of the demultiplexed data into the first protocol;

first transmitting means for transmitting the data converted by said first converting means to the server;

second receiving means for receiving data transmitted from the server to the client;

second converting means for converting the first protocol of the ~~received data~~ received by the second receiving means into the second protocol;

multiplexing means for multiplexing data of multiple connections of the second protocol converted by said second converting means so that a connection ~~with a~~ using the increased ~~changed~~ window size in the transport ~~layer protocol level can be used continuously and the~~ larger amount of data can be transmitted; and

second transmitting means for transmitting the data multiplexed by said multiplexing means to the network.

17. (CURRENTLY AMENDED) A communicating system for relaying a communication between a server and a client, comprising:

first receiving means for receiving data transmitted from the client to the server;

first converting means for converting a first protocol ~~at in~~ an application ~~layer protocol~~ level of the received data into a second protocol ~~at in~~ the application ~~protocol layer~~ level, ~~the second protocol allowing an increase of~~ ~~where~~ a size of a data transfer window ~~in for~~ a transport ~~layer protocol level can be changed, the second protocol allowing so that~~ a larger amount of data ~~can~~ to be transferred at a ~~one~~ time ~~than with a data transfer window whose size is not increased~~;

multiplexing means for multiplexing data of multiple connections converted by said first converting means so that a connection with an increased ~~a changed~~ window size in the transport

layer protocol level can be used continuously;

first transmitting means for transmitting data multiplexed by said multiplexing means to the network;

second receiving means for receiving data from the network, the data obtained by:

converting the first protocol of data transmitted from the server to the client into the second protocol, and by

multiplexing data of multiple connections so that a connection with a changed an increased window size in the transport layer protocol level can be used continuously, and the larger amount of data transmitted to the network by continuously using the ~~another~~ second protocol;

demultiplexing means for demultiplexing the received data;

second converting means for converting a protocol of the demultiplexed data into the first protocol; and

second transmitting means for transmitting the data converted by said second converting means to the client.

18-20. (CANCELLED)

21. (CURRENTLY AMENDED) A method of relaying communication between a server and a client, comprising:

converting a first protocol in an application layer ~~protocol~~ level of data transmitted from the client to the server into a second protocol in the application layer ~~protocol~~ level where a size of a data transfer window in a transport protocol level can be changed, the second protocol allowing a larger amount of data to be transferred at a time; and

multiplexing data of multiple connections so that a connection with a changed window size in the transport protocol level can be used continuously.